CIVIL AIM CONSULTANTS & ENGINEERS

(Building Geo-Tech & Highway Materials Testing Laboratory)

An ISO 9001-2015 Certified Company

NABL Accredited As Per ISO/IEC 17025:2017 Laboratory

QC ABSTRACT

Nameof Work: Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.

Sl. No.	Item	Quantity As Per BOQ	Required No's of testes	Actual No's of testes	Testes
1	1:3:6	21.17 Cum	1	1	Pass
2	M20	41.74 Cum	4	4	Pass
3	Slab (230mm)	7.20 Sqm	1	1	Pass
4	Slab (100mm)	111.24 Sqm	1	1	Pass
5	GSB	9.24 Cum	1	1	Pass
6	WMM	13.774 Cum	-	-	-
		Gradation	1	1	Pass
		AIV	1	1	Pass
		Shape Test	1	1	Pass
		Atterberg Limits	1	1	Pass
7	DBM	3.08 Cum	-	-	-
		Quality of Binder	1	1	Pass
		AIV	1	1	Pass
		Shape Test	1	1	Pass
		Gradation	1	1	Pass
		Specific Gravity	1	1	Pass
		Stability of Mix	1	1	Pass
		Bitumen content	1	1	Pass
8	BC	13.44 Cum	-	-	-
		Quality of Binder	1	1	Pass
		AIV	1	1	Pass
		Shape Test	1	1	Pass
		Gradation	1	1	Pass
		Specific Gravity	1	1	Pass
		Stability of Mix	1	1	Pass
		Bitumen content	1	1	Pass

A.E.E

Cubes

0-5 Cum	1Set
6-15 Cum	2Set
16-30 Cum	3Set
31-50 Cum	4Set

Add 1set for extra 50Cum

For CIVIL AIM CONSULTANTS & ENGINEERS

Authorised Signatory

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Job No.: CACE/BBMP/NKMN/W.No.01/2022-23

Date: 11.01.2023

TEST REPORT

CLIENT	:	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	:	**Sri. Nandan Kumar M N,** Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.
SAMPLE ID	:	Cement (Dalmia OPC 53 Grade)
DATE OF MANUFACTURE	:	December - 2022
DATE OF TESTING	:	09.01.2023 to 11.01.2023
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269-2015
1	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	330 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	-

Note:

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⇒ Any Query regarding the report must be reported within 30days from the date of testing.

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Job No.: CACE/BBMP/NKMN/W.No.01/2022-23

Date : 12.01.2023

TEST REPORT OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. Nandan Kumar M N,** Contractor, Bangalore.

Name of Work : Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.

Steel Dia/Length : 10mm,12mm " Fe500 TMT Bars"

Reference to BIS codes : IS 1786:2008(RA 2013) High Strength Deformed Steel Bars and Wires for Concrete Reinforcement-Specification

: IS 1608:2005 Metallic Materials- Tensile Testing at Ambient Temperature

Date of test : 12.01.2023

S.No	Brand	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH			
				0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation, percent on gauge length
1	TMT	10	0.617	555	642	1.16	14
2	TMT	12	0.889	568	665	1.17	15

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Job No.: CACE/BBMP/NKMN/W.No.01/2022-23

Date: 27.01.2023

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. Nandan Kumar M N,** Contractor, Bangalore.

Name of the work : Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.01.2023	27.01.2023	8.166	335.2	14.90
2	20.01.2023	27.01.2023	8.152	340.6	15.14
3	20.01.2023	27.01.2023	8.146	329.3	14.64

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JobNo: CACE/BBMP/NKMN/W.No.01/2022-23 Date : 14.02.2023

TEST RESULTS OF AGGREGATE SHAPE TEST
(Flakiness & Elongation)

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. Nandan Kumar M N,** Contractor, Bangalore.

Name of work : Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.

BIS Code : IS 2386 Part (1):1963

Date of Test : 14.02.2023

Type of Mix : Dense Graded Bituminous Macadam

Sl.No.	Flakiness Index Value(%)	Elongation Index Value(%)	Total(Combined Flakiness and Elongation)(%)	Requirements
1	11.80	13.20	25.00	Maximum allowable Combined Flakiness and Elongation Indices for Dense Graded Bituminous Macadam is 35% as per Table 500.8 MORTH Specification.
2	12.10	13.70	25.80	

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No.: CACE/BBMP/NKMN/W.No.01/2022-23

Date : 17.02.2023

Specific Gravity And Water Absorption Test

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. Nandan Kumar M N,** Contractor, Bangalore.
Name of the Work	Improvements to roads and drains at Lakeview Layout and Jayamuni Layout in Kempegowda ward no-01 of Yelahanka Sub Division, BBMP, Bangalore.
BIS Code	IS 2386(Part 3):1963
Type of Mix	Bituminous Concrete
Date of Testing	15.02.2023 to 17.02.2023

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2021	2023	2025	
2	Weight of basket suspended in water	W_2 g	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1266	1268	1270	
4	Weight of saturated surface dry aggregate in air	W_3 g	2017	2019	2021	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	751	751	751	
6	Weight of oven dried aggregate	W_4 g	2010	2011	2012	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.676	2.678	2.679	2.678
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.702	2.707	2.712	2.707
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.35%	0.40%	0.45%	0.40%

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Concrete is 2.0%(MORTH table 500.16)

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